

Appl. No. : 10/009,011  
Filed : July 19, 2002

### REMARKS

A. Restriction to one of the following groups was required under 35 U.S.C. 121 and 372:

- Group I Claims 1-6, 9, 10, and 14-21, drawn to nucleic acid molecules comprising a chimeric BVDV genome comprising a structural region of hepatitis C viral genome, and virus or cells comprising said nucleic acid.
- Group II Claims 7-10 and 14-21, drawn to nucleic acid molecules comprising a chimeric BVDV genome comprising a non-structural region of hepatitis C viral genome, and virus or cells comprising said nucleic acid.
- Group III Claims 11-13, drawn to polypeptides encoded by a viral genome.

In response to this restriction requirement, Applicant elects Group I, that is, Claims 1-6, 9, 10, and 14-21.

B. Additionally, restriction to one of the following groups was required under 35 U.S.C. 121 if Group I is elected:

- (A) a HCV E1 polypeptide;  
(B) a HCV E2 polypeptide; or  
(C) a HCV C polypeptide.

In response to this restriction requirement, Applicant elects, with traverse, Group B, that is a HCV E2 polypeptide. The Applicant traverses the Examiner's assertion that subgroups (A)-(C) lack the same or corresponding special technical features because each of these polypeptides has a different structure and function. The E1 and E2 polypeptides function only as a heterodimer and neither is functional alone. These polypeptides are assembled as a heterodimer (see Dubuisson and Rice 1996 *J. Virol.* 70:778-786) and the infectivity of pseudo-typed viruses bearing the HCV envelope glycoproteins was dependent upon the presence of both E1 and E2 (see Bartosch et al. 2003 *J. Exp. Med.* 197:633-642; and Hsu et al 2003 *PNAS USA* 100:7271-7276). This finding was further confirmed in a subsequent study by Op De Beeck et al. 2004 *J. Virol.* 78:2994-3002, in which the authors state that "the functional unit is a noncovalent E1E2 heterodimer containing complex or hybrid type glycans". Courtesy copies of the cited references are provided herewith as Exhibits 1-4.

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### CONCLUSION

In view of the foregoing, Applicant respectfully requests that this application be passed to issuance. If any points remain that can be resolved by telephone, the Examiner is invited to contact the undersigned at the below-given telephone number.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

Dated: 1/22/04

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